

# NORTHERN MOUNTAINS CONSERVATION PROJECT



*Dho women spinning wool*

## HALF YEARLY TECHNICAL PROGRESS REPORT 01 JULY – OCTOBER 31, 2002

**WWF Nepal Program  
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Nepal**

## Table of Contents

a.	Project:.....	1
b.	Reporting Period .....	1
c.	Name and Address.....	1
d.	Authorship.....	1
e.	Executive Summary.....	1
f.	Wider Context .....	1
g.	Project Goal.....	2
h.	Project objectives .....	2
i.	Progress.....	2
i.(1)	Forests .....	2
i.(1.1)	Follow up BZ and SG .....	2
i.(1.2)	Hand over of BZ Operation Plan. ....	2
i.(1.3)	Environment Conservation and Education training.....	2
i.(1.4)	Environment Conservation Awareness Program.....	3
i (2)	Species .....	4
i (2.1)	Meeting.....	4
i (3)	Sustainable Development.....	4
i (3.1)	Gender Training.....	4
i (3.2)	Savings Groups.....	5
i (3.3)	Solar Distribution and Installation .....	5
i (3.4)	Improved smokeless stoves. ....	6
i (3.5)	Formation of Community Eco Club.....	6
i (4)	Education and capacity building.....	6
i (4.1)	Training/workshop.....	6
i (4.2)	"Phoksumdho" publication .....	7
i (4.3)	Coordination meeting .....	7
i(5)	Applied Research Activities (People and Plants Initiative) .....	7
i (5.1)	Preparation of MAPs Nursery .....	7
i(5.2)	Construction of THCC, Dho.....	8
i(5.3)	Traditional Health Care Centre, Phoksumdo.....	8
i(5.4)	Scholarship to Amchi Students.....	9
i(5.5)	Workshop on "Wise practices and experiential learning in the conservation and management of Himalayan Medicinal Plants" .....	9
i(5.6)	MSc Grantees.....	9
i(5.7)	Project Botanist.....	9
i(5.8)	Himalayan Amchi Association. ....	9
i(5.9)	High Altitude Medicinal Plants in Kanchenjunga Conservation Area. ....	10
i (6)	Project Management .....	10
j.	Impact .....	10
k.	Conclusion .....	10
	Annex 1	
	Annex 2	
	Annex 3	

## List of Abbreviations and Acronyms

BZUC	Buffer Zone User Committee
CFUGs	Community Forest User Groups
DDC	District Development Committee
DNPWC	Department of National Parks and Wildlife Conservation
DPP	District Partnership Program
EE	Environmental Education
EFEA	Environment and Forest Enterprise Activities
HH	Household
HMG/N	His Majesty's Government of Nepal
IUCN	The World Conservation Union
MFSC	Ministry of Forest and Soil Conservation
Mgmt.	Management
MAP	Medicinal Aromatic Plants
NFE	Non-formal Education
no.	Number
NMCP	Northern Mountains Conservation Project
NTFP	Non-timber Forest Product
NGO	Non-government Organization
PPI	People and Plants Initiative
Qty	Quantity
SN	Serial Number
SPNP	Shey-Phoksundo National Park
SAGUN	Strengthened Actions for Governance in Utilisation of Natural Resources
THCC	Traditional Health Care Centre
USAID	United States Agency for International Development
VDC	Village Development Committee
WWF-NP	World Wildlife Fund Nepal Program
Ha	Hectare
BZ	Buffer Zone
DPC	Damp prove course
THCC	Traditional Health Care Centre
DESERT	Dolpo Educational Social and Environmental Reservation Team
LGSTP	Local Governance Strengthening Transition Program

## **NORTHERN MOUNTAIN CONSERVATION PROJECT: HALF YEARLY TECHNICAL PROGRESS REPORT**

- a. **Project:** Northern Mountain Conservation Project
- b. **Reporting Period:** July 01 2002 – October 31 2002.
- c. **Name and Address:** WWF-Nepal Program, PO Box 7660, Baluwatar, Kathmandu, Nepal  
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### **e. Executive Summary**

The northern mountain region of Nepal has a wealth of bio-diversity. The remote Himalayan valleys have been the centres of evolution for many unique life forms and are a natural museum for rich genetic resources, much of which has been lost due to loss of forest coverage and over-exploitation of certain species of plants for trade and local use. Resources overuse is usually associated with the loss of bio-diversity. A number of threats emanate from the over exploitation of natural resources for fuel, fodder, manure, grazing, trade of wildlife species in terms of furs, skins, bone, musk pods and export of orchids and medicinal plants. Poverty, hunger, illiteracy, unsustainable use of natural resources, lack of awareness, and inadequate data for monitoring endangered wildlife species like snow leopard and musk deer have been the prime problems for conservation of Shey- Phoksumdo National Park.

Considering these problems, WWF-Nepal launched the Northern Mountains Conservation Project in and around the SPNP in collaboration with DNPWC. The goal of the project is to conserve bio-diversity in SPNP; the main purpose is to facilitate local management of natural resources and to improve living condition while safe guarding the regions unique natural heritage.

### **f. Wider Context**

The formation of a sister group in the most remote area of Dolpa has been a significant achievement this reporting period. It is encouraging to see this development and is a clear sign that there is motivation for capacity building and empowerment. Coordination meetings held this reporting period between line agencies, NMCP staff and the DNPWC is a positive indication; their full support and commitment is required for effective implementation of these activities from the legal perspective. On the 24th November, SPNP warden handed over the BZUC operational plan to the BZUC representatives. This means that all responsibility of management is now given to the BZUC. At the national level, a regional workshop on Medicinal Plants was held in Kathmandu. This event was jointly organised by HMGs Ministry of Forests and Soil Conservation, IDRC, MAPPA Canada, WWF-NP, and PPI/UNESCO. The workshop was extremely successful and its recommendations have been taken up by HMGs Nepal.

**g. Project Goal**

To conserve biodiversity and improve the socio-economic status of local communities in SPNP and its buffer zone areas

**h. Project objectives**

- Strengthen the capacity of the local community and SPNP staff to carry out development and conservation activities in the protected areas.
- Promote sustainable economic growth to increase local livelihoods
- Strengthen traditional primary health care management systems and promote the sustainable utilization of medicinal plant resources
- Improve coordination and collaboration among various stakeholders for strengthened governance of natural resources conservation of SPNP BZ areas

**i. Progress**

**i. (1) Forests**

Through the forest component of NMCP aims to establish and institutionalise community based natural resource management through user groups and committees to increase forest coverage through nurseries and plantations and promote the sustainable use and management of medicinal and aromatic plants.

**i.(1.1) Follow up BZ and SG**

Project Manager, Tilak Dhakal, and Project Finance and Administrative officer continue to visit field areas for monitoring BZUC, SG and Eco Clubs. This reporting period, community meetings were conducted in Saldang, Dho, Phoksumdho and Tripurakot where the roles and responsibilities of BZUCs were discussed and savings, credit issues with the sister groups and issues related to conservation.

**i.(1.2) Hand over of BZ Operation Plan.**

The BZUCs operational plan was officially handed over on the 24th November 2002 in DUnai by SPNP Warden, Mr. Yuba Raj Regmi to the BZ Committee representatives. To date, 17 BZUC have been formed in SPNP and its BZ areas.

**i.(1.3) Environment Conservation and Education training**

Two conservation and education trainings were conducted this reporting period. One three-day event organized by Dunai Boarding School and a one even organized by SPNP. Both events were technically and financially supported by NMCP. The objectives of the trainings were:

- To provide clear knowledge and information about conservation areas.
- To provide a basic knowledge of snow leopard.  
To provide Eco clubs a role in the field of conservation and share ideas of different Eco clubs.
- To provide basic information about Shey Phoksundo National Parks and its features.

**Training date:13-15 Sept. 2002 Dunai Boarding School**

SN	Name of Participants	Name of School	Class	Boy	Girl
1	Tshering Lama	Dunai Boarding School	7		G
2	Santosh Shahi	"	5	B	
3	Akhanda Updhyaya	"	5	B	
4	Chanda Hamal	"	5	B	
5	Panash Deep Shahi	"	5	B	
6	Chhewang Gurung	"	5	B	
7	Uttim Shah	"	Teacher		
8	Rajesh Rijal	Saraswoti High School Dunai	6	B	
9	Dilmaya KC	"	6		G
10	Bishara Rokaya	"	6		G
11	Asim Shahi	"	7	B	
12	Purna Maya KC	"	7		G
13	Govinda Budha	"	7	B	
14	Hari Prasad Aryal	"	Teacher		
15	Santosh Buda	Bal Mandir Dunai	5	B	
16	Rajesh Subedi	"	5	B	
17	Yagya Bahadur Shahi	"	5	B	
18	Bhim Kumari Shahi	"	5		G
19	Sangita Gurung	"	5		G
20	Nirmala KC	"	5		G
21	Dola Raj Adhikari	"	Teacher		

**i. (1.4) Environment Conservation Awareness Program**

A six day environment and conservation Awareness program was conducted throughout various schools in Tripurakot VDC. A total of 558 students participated in the program that was facilitated by Head Master of Mahakavi Devkota Primary School, Mr Pushpa Raj Mahat, Principle of Tripurasundhari, Mr.Pashupati Dhakal, Chairman of BZUC Mr. Man Bahadur Buda and Tula Chandra Shahi facilitated the awareness programe. The program's main objectives were to provide participants with a basic knowledge on conservation, discuss the importance of conservation, the roles and responsibilities of eco clubs in the community and their potential contributions in the field of conservation.

**Environment and conservation awareness program**

Sn	Center	Name Of School	Boys	Girls	Total	Date
1	Bala Bhadra PS Centre	i . Bala Bhadra PS	23	14	37	15 Sept 2002
		ii. Laxmi PS	8	10	18	
		iii. Mahakal PS	13	5	18	
2	Jyoti Primari School	Jyoti PS Ruma	40	32	72	16 Sept 2002
3	Tripura LSS Centre	Tripura LSS Maddhu	67	37	104	17 Sept 2002
4	Mahakavi Devkota Center	i. Mahakavo Devkota PS	30	45	75	18 Sept 2002
		ii. Bhabani PS Gally	22	18	40	
5	Lekhanah PS	Lekhnath PS Karelikanda	19	32	51	19 Sept 2002
6	Tripura PS Center	i. Tripura PS Kota	43	45	88	20 Sept 2002
		ii. Himjyoti PS Sarkitole kota	30	25	55	
<b>TOTAL</b>			<b>295</b>	<b>263</b>	<b>558</b>	

## **i (2) Species**

Activities under the Species component aim to raise awareness and mobilisation for snow leopard /prey species/habitat conservation, build capacity for the monitoring of snow leopard and prey species and promote the endorsement and implementation of SPNP management plan.

### **i (2.1) Meeting**

In this reporting period, two meetings of snow leopard conservation were conducted. On August 29th 2002, the Snow leopard conservation sub committee under the chairmanship of Tulku Lama convened in Komang, Saldang. On December 5, 2002, representatives of Upper Dolpa's SLCC and BZUC met in Dunai. Also present at the meeting were representatives of SPNP and NMCP. Both of the meetings discussed the current situation facing the Snow leopard in Upper Dolpa, and the responsibilities of the SLCC.

## **i (3) Sustainable Development**

Activities under sustainable development aim to increase women and disadvantaged group's participation and decision-making in conservation and development activities through income generation activities, institutionalisation and increased environmental awareness of Buffer zone user committees for conservation and development activities, and supporting local health care development through capacity building of Amchis and women.

### **i (3.1) Gender Training**

A three-day training covering issues such as gender, gender equity, women and development and women in development was organized by DESERT (Dolpo Educational Social and Environmental Reservation Team) on Sept 16-18 2002 in Dunai. A total of 13 representatives from Sister group member and Eco club's member of Tripurakot VDC participated. Mr Dhana Bahadur Silwal, Roshan Hamal, Bhagabati Sharma and Park Ranger of SPNP, Mr.Birendra Kandel, facilitated the three days training.

### **Sept 16-18 2002,Dunai**

sn	Participant	Design.	Name of CBOs	Address
1	Sita Thapa	Secretary	Rada Sister Groups	Tripurakot Gally
2	Lok Bahadur Shahi	Chairman	Mahakavi Devkota Eco Club	Tripurakot Rally
3	Kamala Ukheda	Member	Sundari Ganga Sister Groups	Tripurakot Rally
4	Chandra Gurung	Chairman	Pragatiseel Eco Club	Tripurakot Karelíkanda
5	Bimala Budha	Member	Buddha Sister Group	Tripurakot Rashi
6	Sattha Bahadur Thapa	Member	Suryodaya Eco Club	Tripurakot Maddhu
7	Hamsha Raj Thapa	Chairman	Samaj Sudar Eco Club	Tripurakot Gally
8	Basanti Katayat	Member	Mahila development Group	Tripurakot Kota
9	Hira Chandra Budha	Chairman	Suryodaya Eco Club	Tripurakot Maddhu
10	Jhanka Bahadur Thapa	Member	Satyadevi Eco Club	Tripurakot Ruma
11	Pabitra Thapa	Member	Himali Sister Groups	Tripurakot Maddhu
12	Bishnu Thapa	Secretary	Tripura Sister Groups	Tripurakot Ruma

### i (3.2) Savings Groups

In this reporting period, a new sister group was formed in Komang gaon, Saldang VDC. This activity is significant because Komang gaon is the most remote village in Dolpa district, and it is hoped that this savings and credit group will allow the Sister group a sustainable micro credit scheme that will allow them financial empowerment. The SG has a total of 21 members, which included an executive committee of 11 members.

Name of the Group: Komang sister group  
 Address: Saldang VDC 9, Komang  
 Established Date: 29 Aug, 2002  
 Total Members 21

#### Komang Sister group's executive members

S.n	Name	Designation	Age	Remarks
1	Ms Khadol Gurung	President	39	
2	Ms Tashi Gurung	Vice president	50	
3	Ms Chhoden Lama	Treasure	18	
4	Ms Bhati Gurung	Secretary	22	
5	Ms Bhuti Gurung	Member	25	
6	Ms Chheme Gurung	"	30	
7	Ms Furba Wangmo Gurung	"	31	
8	Ms Dorjee Doma Gurung	"	35	
9	Ms Nyrsang Gurung	"	35	
10	Ms Bhati Gurung	"	25	
11	Ms Syanten Gurung	"	21	

This reporting period has also seen previously established sister groups initiate savings and credit programs that have been matched by NMCP funds. These funds provide rural credit schemes thus allowing members to establish various income generating activities.

#### Details of Sister Groups

S.N	Name of SG	Address	# of Members	Monthly Saving Rs	Saving by SG Rs	Support NMCP Rs	Chariman
1	Laligurnce SG	Pahada Bhutingra	15	5	3440	35000	Muna Devi Jaisee
2	Himchuli SG	Pahada,Devkotabanda	23	5	5460	35000	Junkali Buda
3	Mukuteshor SG	Pahada Bhorgaon	22	5	3366	35000	Kalu Bohara
4	Tinmuli SG	Kaigaon Thapagaon	60	10	11805	40000	Jaya Thapa
5	Komang SG	Komang,Saldang	21	10	0	29000	Khadol Gurung
<b>TOTAL</b>			<b>131</b>		<b>23061</b>	<b>174000</b>	

### i (3.3) Solar Distribution and Installation

A total of 98 Solar systems have been distributed and installed benefiting a total of 491 people. 70 solar sets were purchased for Saldang, Vijer, and Chauritkot and Chhanchu of Rimi VDC this reporting period. However due to the difficult weather conditions in winter, distribution will only occur in the 1st quarter of 2003.



Details of solar distribution:

S.N	VDC	Ward	# Solar	# HHs	# Female	# Male	Total
1	Saldang	1	2	2	9	8	17
		2	7	7	17	16	33
		3	3	3	8	10	18
		4	16	16	50	41	91
		5	5	5	16	12	28
		6	11	11	32	31	63
		7	6	6	17	21	38
		8	9	9	19	26	45
		9	22	22	44	46	90
	Vijer	7	1	1	0	3	3
		9	15	15	34	31	65
	Total		98	98	246	245	491

i (3.4) Improved smokeless stoves.

Smokeless stoves continue to be a successful activity. This reporting period a total of 30 smokeless stoves were purchased and all have been distributed benefiting a total of 30 households of Tripurakot VDC.

Smokeless stove distribution

sn	cluster	VDC Ward	HHs	Female	Male	Total
1	Karelikanda	9	16	49	44	93
2	Gally	2	14	38	32	70
			30	87	70	163

i (3.5) Formation of Community Eco Club.

On November 5th, 2002, Narayani Eco Club of Raha VDC was established. This brings to the total number of eco clubs to 16 in SPNP and its BZ area.

Name of Eco Club: Narayani Eco Club.

Address: Raha VDC ward No 3/4

Estd Date: November 5 2002

Narayani Eco Club Executive committee members

Sn.	Name	Designation
1	Mr. Mohan Prasad Karki	President
2	Ranga Nath Karki	Vice president
3	Bish Chandra Karki	Treasures
4	Raj Kumar BK	Secretary
5	Sherpa Karki	Sub Secretary
6	Shree Ram Karki	Member
7	Dev Bahadur Karki	Member
8	Mohan Bahadur BK	Member
9	Dharba Karki	Member
10	Jang Bahadur Buda	Member
11	Rana Mul Ukheda	Member

#### i (4) Education and capacity building

i (4.1) Training/workshop

On July 15-21 2002, Finance and administrative officer, Shreedhar Adikhari participated in a "Quick Book" training session in Kathmandu and on December 21-22, participated in a two

day workshop on social mobilisation in Dunai. Tilak Dhakal, Project Manager also participated in a one day logical frame workshop held in Dunai on December 7, 2002 organised by TRPAP, Dolpa, and a two day workshop on Gender awareness, December 23-24, 2002.

i (4.2) "Phoksumdho" publication

A quarterly newsletter published in Nepali was published for the first time during this reporting period. The newsletter is disseminated throughout the region and also sent to Kathmandu. "Phoksumdho" contains literature on conservation composed by local writers including members of various CBOs, Line Agencies, NMCP and SPNP staff.

i (4.3) Coordination meeting

Two coordination meetings on the 8th and 18th December were held this reporting period. Both the former and latter meetings involved SPNP and NMCP staff members but included in the latter were Line agency staff. Both meetings discussed the importance of coordinating between the various bodies. The latter meeting also addressed the need to prevent duplication of activities within SPNP and the BZ area.

Co-ordination meeting's participants list December 8th 2002

SN	Name of participants	Address and profession
1	Mr Yub Raj Regmi	Warden SPNP
2	Mr.Tilak Dhaka	PM NMCP
3	Mr Ramlochan Singh	Ranger SPNP
4	Mr.Bhogendra Rayamaji	Ranger SPNP
5	Mr.Birendra Kandel	Ranger SPNP
6	Mr.Shreedhar Adhikari	FAO NMCP

Coordination meeting's participants list December 18th 2002

SN	Name of participants	Address and profession
1	Mr Yub Raj Regmi	Warden SPNP
2	Mr.Tilak Dhaka	PM NMCP
3	Mr Ramlochan Singh	Ranger SPNP
4	Mr.Bhogendra Rayamaji	Ranger SPNP
5	Mr.Birendra Kandel	Ranger SPNP
6	Mr.Shreedhar Adhikari	FAO NMCP

**i(5) Applied Research Activities (People and Plants Initiative)**

i (5.1) Preparation of MAPs Nursery

A nursery for MAPs was established with the technical help of Project Botanist, Mr. D.P Shahi in Pahada VDC. A Jadibuti Khetee committee was also established following the decision of local CBOs, BZUC and other committee representatives. Mr Surya Bahadur Buda was selected chairman of this committee. The nursery covers an area of 600 m<sup>2</sup>. Construction of the boundary wall was completed with the labour component supplied by people from ward no 7,8, and 9 of Pahada VDC and seeds of Bhulte, Katuko, Samayo, Atis and Hattijaro were planted in the nursery.

The committee also selected Mr. Surya Bahadur Buda to be the nursery naika (caretaker). Mr. Buda was selected due to his prior technical experience working with PPI's activities.

### Details of the MAPs Nursery, Pahada VDC

S.N.	Particulars	Details
1.	Total budget for nursery preparation work	Rs. 45000
2.	Length of stone wall/boundary	100 m
3.	Total areas of the nursery	600m <sup>2</sup> (30m*20 m)
4.	No of major plots	5

### i(5.2) Construction of THCC, Dho

The main building's superstructure has been completed. This included door and window frame fixtures, the ceiling and the laying of the mud roof. Finishing works i.e. painting and boundary wall construction will be completed in the 1st quarter of 2003.

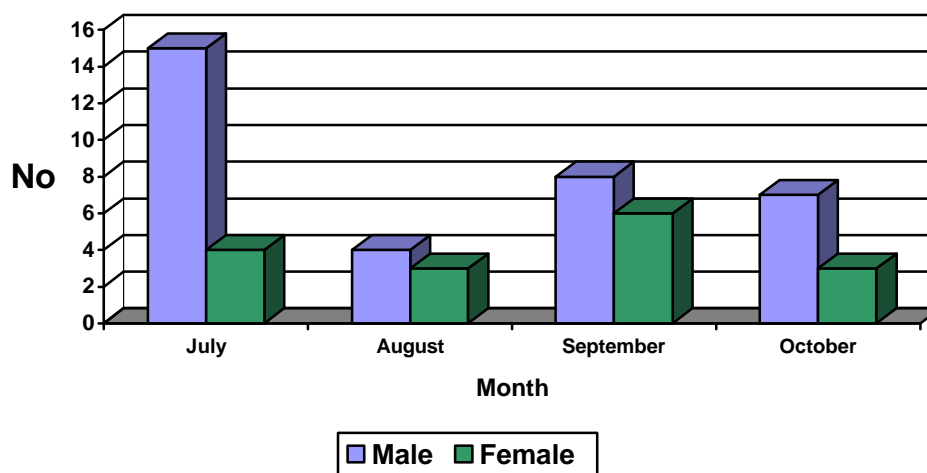
### i(5.3) Traditional Health Care Centre, Phoksumdo

The THCC continues to operate successfully under the management of Semduk Lama and Amchi Nurbu Lama, two amchi trainees, Namdak Lama and Lundup Lama and administrative personnel Larkey. A total of 50 patients visited the centre this reporting period.

Detail of patients attending THCC, July – October 2002

Month	Male	Female	Total Beneficiaries
July	15	4	19
August	4	3	7
September	8	6	14
October	7	3	10
<b>Total</b>	<b>34</b>	<b>16</b>	<b>50</b>

**Phoksumdo THCC Patient attendance**



#### i(5.4) Scholarship to Amchi Students

As a part of NMCP/PPI's efforts to increase the capacity of Amchi in Dolpo, three students amchis are being sponsored at Dhorpatan Amchi School, Baglung District, two of Rigmo and Pugmo community are serving as interns at the Phoksundo THCC and the girl amchi student continues to study in Upper Dolpo. The interns and the girl amchi student are also being sponsored by NMCP/PPI.

#### Sponsored Amchi students

SN.	Name of Student	Address	Remarks
1.	Mr. Tshring Buda	Ringmo,Phoksundo VDC	Dhorpatan
2.	Mr. Pankyap Baijee	Pungmo,Phoksundo VDC	Dhorpatan
3	Mr. Namsai Lama	Pungmo,Phoksundo VDC	Dhorpatan
4.	Mr. Namdak Lama	Ringmo,Phoksundo VDC	THCC Phok.
5.	Mr. Lundup Lama	Pungmo,Phoksundo VDC	THCC Phok.
6.	Miss Pema Puti Lama	Pungmo,Phoksundo VDC	THCC Saldang

#### i(5.5) Workshop on "Wise practices and experiential learning in the conservation and management of Himalayan Medicinal Plants".

From December 17 – 22nd, a regional workshop on Wise practices and experiential learning in the conservation and management of Himalayan Medicinal Plants was held in Kathmandu. This workshop was jointly organised by HMGs Ministry of Forests and Soil Conservation, IDRC, MAPP, WWF-NP and PPI/UNESCO. The workshop aimed to analyse attributes, situations and conditions in which wise practices appear to have been developed and being picked up by others and compare different situations, common variables, and conditions to develop a set of overarching principles, which may be used in replicating and scaling-up successful models at sub-national, national and regional levels. The recommendations of the workshop are attached in annexe 1.

#### i(5.6) MSc Grantees

Two MSc grantees Maan Bahadur Rokaya and Nagendra Kurumbang completed their technical reports this reporting period. The overall objective of the study was to document the socio-economic strategies of medicinal and aromatic plants (MAPs) harvesting for trade. Their findings will be presented in Kathmandu at the end of the first quarter of 2003.

#### i(5.7) Project Botanist

Project Botanist Dhan P. Shahi conducted his first field trip this year. On his most recent field trip this reporting period, the Project Botanist established a medicinal plants nursery, a committee to manage the nursery and a nursery naike (helper) that was selected by the committee. In addition to this, he also conducted various seed collections of MAPs from SPNP and its buffer zone areas.

#### i(5.8) Himalayan Amchi Association.

The Himalayan Amchi Association held their third annual amchi conference on 22-26th December 2002. Amchis from Dolpa, Mustang, Humla and Jumla attended this meeting that was partly sponsored by PPI/WWF-NP. See annexe 2 for the recommended guidelines from the conference.

i(5.9) High Altitude Medicinal Plants in Kanchenjunga Conservation Area.  
Consultant Shoba Sherpa completed her report on sustainable utilisation and management of high Altitude Medicinal Plants in Kanchenjunga Conservation Area. Her recommendations can be referred to in annexe 3.

**i (6) Project Management**

i (6.1) Program Officer Yeshe Lama left for the UK to pursue a one year MSc course in ethnobotany. In her absence, Kala Gurung has joined WWF-NP. Kala Gurung and Program Support Officer, Prem P. Shrestha were in NMCP from 26.10.02 – 10.11.02. The purpose of their trip was to conduct an evaluation of the NMCP project. Their findings will be part of a final 5-year retrospective report, which is scheduled to be released in the following quarter.

**j. Impact**

The NMCP project continues to increase local capacity through development trainings, awareness programs and institutional capacity building of community based organisations. The close coordination and networking of NMCP project staff with the SPNP staff and security officials has proved to be effective in ensuring that transport of goods and equipment (stoves and solar) has not been delayed. With the tightening of security in these areas, the transportation of goods such as pipes and nails was difficult if not impossible. However NCMP staff were able to continue with these activities as scheduled.

**k. Conclusion**

With the ending of 6 years of US Aid funding, the Northern Mountain Conservation Project will continue to operate. Community based organisations that have been formed over the course of the 6 years will now enter their second-generation activities – that of strengthened actions for governance in the utilisation of natural resources (SAGUN). SAGUN is funded by USAid and provides continuity of the past 6 years under SO5. This project aims to ensure that Nepal's Natural Resources are managed in a democratic way, that performance of selected intuitions is improved to meet the principles of good governance and participation, and in particular, that the benefits derived from natural resources are dispersed in accountable and transparent ways to the local communities and that they and other revenues are equitably distributed.

## **Annexe 1.**

### **Multitheme A Wild harvesting and in situ conservation of MAP diversity**

Issue 1: Need to make different stakeholders aware of diversity, distribution, and threats to the MAPs and related traditional knowledge and practices in their localities.

Issue 2: Need to ensure successful community participation in in-situ conservation and related livelihood activities.

Issue 3: Need for policy level interventions and support for conservation and sustainable use including trans-boundary and national trade of MAPs.

Issue 4: Need to make trade and marketing systems environmentally and socioeconomically sustainable.

#### **Recommended Key Actions**

##### **Target groups**

##### **1. All stakeholders:**

Promote networking and information sharing among all stakeholders through creating common platforms and wise practice working groups.

##### **2. Communities:**

- Recognise existing traditional organizations and/or organise local communities in user groups for participatory planning and decision making and, establish cooperatives and groups in communities for in situ management, processing and processing;
- Participatory assessment of critical livelihood issues related to MAPs utilisation and assessment of MAP vulnerability and develop clear understanding and enforcement of community access to available resources in a sustainable manner;
- Create awareness related to conservation issues through training, workshops, publications, school curricula and improve understanding of communities for good quality and sustainably collected products. Projects, NGOs and Government should provide communities information on market prices to increase their bargaining power, how to best collect and dry, grade & package plants and training in value adding processes and monitoring of local resources to ensure sustainability.
- Evolve political and socio-economic incentives for in-situ conservation, such as constituting communities into visible groups with higher negotiating power, lower taxes for sustainably collected products, creating better linkages and arrangements with traders, arrange facilities and enterprise plans for value addition.

### 3. Researchers:

- Prepare conservation status report through critical review of past research work and history of trade, impact of existing policies, mark-up price along market and supply chains.
- Critically review policy on Banning of MAP species for collection and trade and provide scientific evidence for restrictions.
- Determine policy and conservation strategy on sustainable resource use by identifying and involving community-based institutions and their participation in in-situ conservation by implementing community management plans for sustainable harvesting systems (including institutional and monitoring arrangements).
- Analyse resource rights and recommend incentive-based access and benefit sharing system management of MAPs.
- Prepare policy briefs for policy makers based on good information; disseminate results including at planning meetings.

### 4. Planners and policy makers:

- Recognise access rights in protected areas (according to categories of PAs) for local use; recognise community rights of access and control over resources on their land;
- Provide information relevant to conservation and sustainable use on MAPs for communities and traders.
- Provide legal recognition of Traditional Health Care Systems and develop appropriate training of traditional health care practitioners, which does not affect the integrity of their knowledge and cultural systems.
- Frame separate rules and provide incentives for both sustainable wild collected and cultivated MAPs.
- Provide more funding for in situ MAP conservation.
- Base restrictions on MAP collection on good scientific evidence.
- Develop rules and regulations for transit and taxation of MAPs, which promotes sustainability.
- Guarantee minimum selling price for products collected sustainably.
- Constitute and/ or strengthen national MAP board by balanced representation of different stakeholders.

### 5. Traders and industries:

- Conduct stakeholders meetings including herbal practitioners and community organisations;
- Monitor MAPs and become involved in ensuring that supplies are sustainable from particular places.
- Develop green labels in relation to sustainable and organic sourcing.

### 6. Herbal practitioners:

- Obtain written consent or enter into benefit sharing agreement before revealing their secrets.
- Encourage herbal practitioners to share knowledge and train the younger generation; use brochures to promote their profession, (their practices, knowledge and identity);

- Integrate herbal practitioners in research teams and returning results to their communities.

7. Managers:

- Managers should engage in work on MAPs and related habitat conservation with communities.
- Build capacity of managers on conservation and livelihood issues through exposure trips, workshops and other means; develop skills on assessing MAP resources and to identify priority actions needed for conservation and sustainable use.



**Multi-Theme B:**  
**Domestication/Cultivation/Ex-situ Conservation/Marketing**

**Key Issues:**

1. Need to institutionalise and scale-up the lessons learnt from the projects and local-level case studies;
2. Need to make process of domestication/cultivation/ex-situ conservation economically viable or profitable for all stake holders;
3. Need to develop cultivation practices of MAPs integrated into overall agricultural or farming practices of local communities and their livelihoods;
4. Need to develop marketing and trading practices to equitably benefit all stakeholders, especially the small-scale growers and processors.

**Recommended Key Actions**

1. Prioritise MAP species having high economic and health values through participatory process such as CAMP, Site/Village and Species Matching, Stake Holder Consultations involving R & D institutions, NGOs, government agencies and local communities;
2. Set up apex bodies with representation of cultivators, industry, NGOs and GOs for influencing policies, lobbying and accessing funds; coordinating all MAP related activities and promoting good practices (GO);
3. Make national action plans with active participation of local people and determine participatory, decentralized and sustainable implementation mechanism (NGOs with support from GO);
4. Provide proper incentives to farmers by providing secure tenure and greater access to community and degraded forest lands, good quality seeds/seedlings, micro-credit on soft terms; accessible markets. e.g., Designate certain landscape as MAP Production/Development Areas for greater impact (GOs, NGOs and Enterprises).
5. Develop mechanisms such as buy-back guarantees with industries supporting development of Farmers' Groups producing quality and certified raw materials (NGOs);
6. Develop a system of market, price, demand related information gathering, and database development and disseminate them through newspapers, radio, internet and mass media (NGOs or Enterprises);
7. Development of training materials on good cultivation practices, primary processing, intercropping field experience of GOs/NGOs/INGOs in consultation with relevant government institutions, e.g. R & D institutions, local farmers and industries (Apex Bodies);

8. Support policy development and implementation to allow lease or use of government land through forest department with support from horticulture and livestock department for organic and other integrated MAP cultivation (CBOs, NGOs and INGOs);
9. Provide training and economic incentives (e.g., provision of input subsidies, quality extension service, tax relief, good practice awards, market guarantee etc. for master growers (individual or groups) by developing partnership among government, industry, NGOs and conservation agencies;
10. Develop and promote national and international markets for quality MAPs in coordination with business associations, MAP industry, traders, INGOs and NGOs (GOs, NGOs and Industry);
11. Commercialisation process should be made transparent and fair through support to local MAP growing communities and facilitation by NGOs/INGOs and pro-active participation of governments;
12. Production and marketing enterprises should be developed at the community level through favourable policy and incentives structures facilitated by an Apex body at the centre and capacity building and development of input and extension delivery system at the local level (Implementers: Rural/Local Development Dept., Rural Banks, NGOs);
13. Augmentation of MAP resource-base by allowing in-situ regeneration management through improved JFM, PFM and CFM policies (implementers: governments, NGOs and CBOs)
14. Financing of nursery development, cultivation, processing, development of marketing and storing facilities should be done at low interest rate by rural development banks by encouraging and mobilizing saving/credit groups and community enterprises at the local level.

**Multi-theme C:**  
**Traditional Medicinal Systems/Benefit Sharing/Indigenous Knowledge Protection and Ethical Practices**

**Key Issues:**

1. 1: Need to determine ethically sound practices in documenting, publishing and benefit sharing of local health traditions-based knowledge and practices;
2. Need to avoid exploitative commercialization and industrialization effects on conservation status of the resources and good traditional practices;
3. Need to integrate traditional and modern medicinal practices especially to benefit local people and protect their knowledge systems.

**Recommended Key Actions**

1. Govt. should set up an apex or central body having representatives of all stakeholders similar to the NIF (National Innovative Foundation, India) to preserve and promote IK;
2. Develop guidelines and protocols for documentation of indigenous knowledge by developing a datasheet related to all aspects of plant use, habitat, nomenclature and all other relevant aspects specifying participatory approach involving local community and experts (by Apex bodies like NIF or Council on Traditional Management Systems);
3. With active participation of community and experts, suitable technologies and practices should be refined and developed which are suitable and accessible to the local communities such Tribals, Ethnic Minorities etc. (implementer: Apex bodies)
4. Evaluate and improve practices such as Rural Areas Local Health Traditions promoted by FRLHT for adoption in rural areas;
5. Develop and incorporate TMS related curriculum in school and university level;
6. Identify small clusters for documenting use, carrying out an in-depth research as PRAs-based results present pretend to be superficial. (Implementers: agency hired by apex bodies)
7. Develop suitable collection techniques for vital parts/plants for wild collection with the help of communities and experts and collect voucher specimens and keep a herbarium at village information Centre (implementer: Apex bodies and execution by NGOs and Government Officials).
8. Designate and implement MAP Conservation area network such as MPCA in South India by improving their design and impact (implementers: FD, CBOs, NGOs and R&D Institutions);
9. Registration and Certification of traditional healers, collectors, growers and other stakeholders (implementers: Recognized Legal Bodies – community forest user groups/panchayats/VDCs etc.)
10. Retailers and stockists must be registered with the government and they should disclose the sources of MAPs (implementers: Apex bodies)

11. Develop laws and rules to secure community-based documentation, ownership and value-addition of IPRs/IKs and ensure equitable benefit sharing (implementers: APEX bodies);
12. Standardization and Certification of TMS and LHPs by Health Ministry and TMS Dept. (*implementer*: TMS Council apex bodies with facilitation from INGO/donor agencies); standardization should cover both the service and products targeted for commercialisation;
13. Government run basic/higher Amchi courses should be improved with curriculum developed by the Amchi Association and approved by the government and it should be integrated into primary health care system;
14. Include a sub-course on *TMS* practice in modern medical education systems including Pharmacology (implementer: government through body of experts on TMS);

## Annexe 2

### Himalayan Amchi Association Third Annual Meeting 22-26th December Recommendations

Guidelines recommended by the amchis of Nepal for using high altitude Himalayan medicinal plants that are becoming rare.

Third Amchi Conference organized by the Himalayan Amchi Association, December 22-26, 2002.

SN	Amchi Name	Reasons for plant becoming rare/rarity	Recommendations for management
1	Bashaka	Grows in a specific habitat; less moisture; used in high volume for medicine; not cultivate	Take care of seed in soft soil
2	Tongzil serpo	Grows only in high altitude habitat; cannot be cultivated	After harvesting, mix the soil so as to allow the seed to germinate in one year's time
3	Ditha sazin	Grows in specific (high altitude) habitat; whole plant is harvested	Harvest only 50 % from one cluster
4	Gangachung	Grows in specific habitat	Collect only the flowers; collect 50% from one cluster
5	Honglen	Whole plant used; found in few habitat (za and ya pang); highly traded	Collect only 50%; enforce government ban on collection
6	Jagopoe	Grows in few habitat (za and ya)	Collect only leaves and flowers
7	Ligadur	Root used in high quantity in medicine	Can be reproduced from the root and seed; Seed to be carefully stored and sown in moist soil
8	Luduedorje	Grows in a specific habitat (high altitude); highly grazed by livestock	Collect only leaf, stem and flowers; do not harvest root
9	Pangyenkarpo	Grows in a specific habitat; highly used in medicine; flowers few and difficult to bloom (only 4-5 flowers per plant)	Collect only 50% of the flowers; do not uproot plant
10	Ranye	Grows in a specific habitat; root is used	Regeneration from seed; harvest only 50%
11	Rekon	Grows in a specific habitat (high altitude); small size of the plant; amount decreases after drying	Harvest in autumn after the seeds have dispersed for regeneration
12	Shaphoruta	High volume used in medicine. Not cultivate (few plants grown in garden)	Cultivate through seed and root (will take 3 years)
13	Taksha nakpo	Grows in a specific habitat; highly used in medicine	Collect only 50% of the stem
14	Tiyangku	Grows in specific (high altitude) habitat	Do not uproot; propagate through seed
15	Ukchoemarp	Grows in a specific habitat; highly used in medicine; collected by children for its colorful flower	Collect only 30% of the flowers
16M	Wanglak	Grows in a specific habitat; root is harvested	Collect only 30% of the root; propagate through seed and root
17G	Bongkar	Collected by traders at all season	Regulate collection for trade; collect only required amount each year at the appropriate season when the plant is mature; leave plant for regeneration ; initiate cultivation trail in situ and ex situ
18 G	Tikta (baltik)	Collected by traders in large amounts each year (2-3 thousands kilograms)	Regulate collection for trade; collect when plant is mature so as to allow for seed to regenerate; Initiate cultivation
19G	Dimok	Naturally rare in habitat; trade pressure	Collect only required amount for use each year; initiate cultivation through seed

20G	Dhurji	Naturally rare in habitat; root is collected for use; traded; used in low volume only in 10 % of medicine	Propagation possible through root
21G	Honglen	Traded in high volume for the last 10 years	Collect necessary amount when plant is mature; leave plant material for regeneration; initiate in situ cultivation
22G	Bongmar	Traded; not tried propagation	Collect less than 5 %; propagate through seed
23G	Rekon	Naturally rare	Difficult to propagate as it is found in very high altitude
24G	Serkyimetok	Not abundant as before due to increasing trade	Collect fruits from few plants; propagate in situ
25G	Sertik	Naturally rare in specific habitat; amchi only collect about 5 % as it is not used in medicine	Propagate through seed
26G	Solo karmo	Naturally rare; amchi collect it in Tibet	
27G	Bongnak	Although abundant, its root is highly traded	Amchi use only small amounts
28G	Wanglak	Become rare from trade	Government ban on collection initiate experimental propagation
29G	Zimpa		
30G	Bongkar	Whole plant is traded as well as used locally for medicine; high pressure	Management support cultivation
30D	Tongrizilpa	Naturally rare and found in specific habitat	Initiate cultivation trial
31D	Dega		
32D	Dhurji	Naturally rare	
33D	Karpochikthub	Naturally rare	
34D	Nyeshing	Root is traded and used locally for medicine	
35D	Lukmur	Naturally rare	
37D	Zimpa		
38D	Dakkyahawa		
39D	Tiyangku	Naturally rare	
40D	Upal ngonpo	Naturally rare	
41D	Yakyima	Naturally rare; traded	
42D	Gonie		
43	Chumtsa	Root is traded and used for medicine; becoming rare	
44	Ligadur	Root is used	
45	Koma	Root is used	
46	Tarbu	Naturally rare	
47	Pangpoe	Root is used for trade and locally for incense and medicine; high threat	Initiate cultivation

## Annexe 3

**Shobha Sherpa's recommendations** from a report on the "Sustainable Utilisation and management of high altitude medicinal and aromatic plant resources in Kanchenjunga conservation project area", December 2002 for WWF-NP.

Based on the surveys and findings of a one-year research, the following recommendations have been outlined for the sustainable utilization and management of high altitude medicinal and aromatic plants.

### A. Social and economic development

A Socio-economic development is much required for the remote mountain communities (from Walangchung Gola VDC), who depend upon forest activities such as extracting MAPs, timber, firewood and fodder grass to maintain their livelihoods. Prohibiting the over exploitation of important medicinal and aromatic plants can only be introduced when alternative livelihood strategies, employment and income generation are made available.

#### 1. Employment opportunities should be provided

Traditionally, among the Walangchung communities, men go out for trade and women handle household work, care for the children and also produce carpets for sale. Due to changes in many circumstances, trade with Tibet is declining that very few local traders exist in the village at present and the majority of men do not possess regular jobs. As a result of this, they have become more involved in forest activities mainly MAP collection and sale. If alternative employment opportunities existed or were created, the community would be less involved in activities of MAP extraction which then lead to less pressure on the plant population.

#### 2. Promotion of carpet industry and market links would be best step

Carpets of Walangchung Gola are well known for the quality of wool and traditional designs. These are sold locally, or brought to Taplejung bazaar, Kathmandu and occasionally exported to Tibet. Since the market is not reliable, the products are mainly sold to Taplejung based traders, who offer producers low prices but then resell them for large profit. Local people would benefit if a market centre or market links were provided and carpet manufacturing as a local industry were promoted. People would definitely be benefited if it would happen, and pressure on the forests and pasture would reduce.

#### 3. Tourism promotion for livelihood improvement

Tourism is another possibility for providing people employment opportunities and income generation. Ghunsa, thought a poorer village than Walangchung, has been benefited over the past decade through tourism; specifically, livelihood, sanitation, and infrastructure. Nowadays no one collects medicinal plant or firewood collection for sale in Ghunsa. Many locals own lodges, restaurants, teashops and camping sites, while other earn their income as porters for tourists. On the other hand, Walangchung, once a thriving center for trade and administration, has remained a restricted area for tourists for many years, and has thus not had the same opportunities as Ghunsa. Therefore, tourism promotion in the area would be effective in terms of MAP conservation by giving people alternative livelihood strategies.

### B. Proper conservation measures

Regulations restricting collection and sale of income producing species would result in the loss of a livelihood source. Inadequate rules and regulations should not be imposed in

all areas, and it would be very effective and welcoming if appropriate rules were applied in a given area. It would be important to identify the local and site specific levels of rarity before implementing conservation measures such as a total *ban* on the collection and sale of MAPs.

1. Ban on kutki (*Neopicrorhiza scrophulariiflora*) should be lifted

According to the local people's perception of life cycles and distribution of kutki (*Neopicrorhiza scrophulariiflora*), it reproduces both by seeds and by rhizomes thus it will never decline from the place where it is harvested. However, it takes time until it is ready for collection. Kutki (*Neopicrorhiza scrophulariiflora*) is the most widely available species in and around high altitude pastures and forests of Tamor valley. According to Ghimire *et. al.* (2000), Kutki (*Neopicrorhiza scrophulariiflora*) is a vigorous clonal plant with widely spread ramets thus the harvest of rhizomes does not always have to lead to the death of the genet. Therefore, it would be better for the people as well as for conservation if the ban is lifted and sustainable harvesting or a rotational harvesting system is brought into practice.

- 2 Monitoring and management

The existing Conservation Area User Committee could be made more active in the local monitoring and management of medicinal and aromatic plants particularly of those traded in large scale. People's participation should also be encouraged in the decision making at the local level. Monitoring of harvesting sites during the collection season would reduce over harvesting and illegal collection by outsiders.

- 3 Awareness and training

Communities should be given training from time to time on conservation and the sustainable utilization of natural resources. Awareness trainings could be given through formal and non-formal education programs. Trainings on the sustainable harvesting techniques would be important to reduce pressure on the plant population.

4. Further research

Further research is recommended in the detail study of ecology and biology of highly traded species and chiraito (*Swertia chirayita*) cultivation, production and its impact on biodiversity.